	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
1	BRS	L1	839	antimicrobial adj peptide	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/12/30 10:35			0
2	BRS	L2	0	platelet adj microbicidal adj protein	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/12/30 10:37			0
3	BRS	L3	1	platelet adj microbial adj protein	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/12/30 10:39			0
4	BRS	L4	0	1 same 3	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/12/30 10:39			0
5	BRS	L5	2	yeaman adj michael.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/12/30 10:40			0
6	BRS	L6	3	shen adj alexander.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/12/30 10:42			0
7	BRS	L7	1458	pmp	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/12/30 10:42			0
8	BRS	L8	0	1 same 7	USPAT; US-PGPUB; EPO; JPO; DERWENT	2002/12/30 10:42			0

=> d his

(FILE 'HOME' ENTERED AT 11:14:51 ON 30 DEC 2002)

FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT
11:15:27 ON 30 DEC 2002

L1 8040 S ANTIMICROBIAL PEPTIDE
L2 7 S PLATELET MICROBIAL PROTEIN
L3 1 S L1 (P) L2
L4 4657 S PMP
L5 12 S L1 (P) L4
L6 4 DUPLICATE REMOVE L5 (8 DUPLICATES REMOVED)

=> log y

greater against logarithmic- than stationary-phase cells. TPMP bactericidal activity against both B. subtilis and S. aureus was directly correlated with temp. and pH, with microbicidal activity exhibited near the physiol. range (37 to 42.degree.C and pH 7.2 to 8.5, resp.). The presence of cations (Na+, K+, Ca2+, and Mg2+) decreased tPMP bactericidal activity in a time- and concn.-dependent manner, with complete inhibition at monovalent or divalent cation concns. of .gtoreq.250 or .gtoreq.10 mM, resp. Staphylocidal activity of tPMP was also inhibited by the polyanions polyanetholsulfonic acid and polyaspartic acid, at 0.1 and 0.4 .mu.M, resp. Coincident exposure with low-MW carbohydrates (glucose, sucrose, and melezitose) did not affect tPMP staphyloccocidal activity. However, higher-MW carbohydrates (raffinose and extrans) decreased tPMP activity in a manner directly proportional to their concn. and MW. Solute-mediated inhibition of tPMP bactericidal activity was independent of solute osmolality but directly related to the duration of tPMP-solute coexposure. TPMP enhanced the staphyloccocidal activities of platelet-free plasma and heat-inactivated serum, while the activity of normal serum was not affected. These collective observations suggest that tPMP retains antimicrobial activities under physiol. conditions which are likely to be relevant to host defense in vivo.

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=> d his

     (FILE 'HOME' ENTERED AT 11:14:51 ON 30 DEC 2002)

     FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT
     11:15:27 ON 30 DEC 2002
L1          8040 S ANTIMICROBIAL PEPTIDE
L2             7 S PLATELET MICROBIAL PROTEIN
L3             1 S L1 (P) L2

=> s pmp
L4          4657 PMP

=> s l1 9p) l2
MISSING OPERATOR L1 9P
The search profile that was entered contains terms or
nested terms that are not separated by a logical operator.

=> s l1 (p) l4
L5             12 L1 (P) L4

=> duplicate remove l5
DUPLICATE PREFERENCE IS 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH'
KEEP DUPLICATES FROM MORE THAN ONE FILE?  Y/(N):n
PROCESSING COMPLETED FOR L5
L6             4 DUPLICATE REMOVE L5 (8 DUPLICATES REMOVED)

=> d l6 1-4 ibib abs

L6   ANSWER 1 OF 4  CAPLUS  COPYRIGHT 2002 ACS
ACCESSION NUMBER:         2002:539709  CAPLUS
DOCUMENT NUMBER:          137:88438
TITLE:                      ***Antimicrobial***     ***peptides***   and derived
                          metapeptides based on modeling of the microbicidal
                          domain of platelet microbicidal proteins (  ***PMPs***
                          )
INVENTOR(S):              Yeaman, Michael R.; Shen, Alexander J.
PATENT ASSIGNEE(S):       Harbor-UCLA Research and Education Institute, USA
SOURCE:                   PCT Int. Appl., 160 pp.
                          CODEN: PIXXD2
DOCUMENT TYPE:            Patent
LANGUAGE:                 English
FAMILY ACC. NUM. COUNT:   1
PATENT INFORMATION:

     PATENT NO.        KIND  DATE          APPLICATION NO.  DATE
     ----------------  ----  --------      ---------------  --------
     WO 2002055554      A2   20020718      WO 2001-US41877  20010824
         W:  AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN,
             CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,
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GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR,
LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL,
PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG,
US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY,
DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF,
BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG
PRIORITY APPLN. INFO.: US 2000-648816 A 20000825
OTHER SOURCE(S): MARPAT 137:88438
AB The invention relates to designing ***antimicrobial*** ***peptides*** basing on the three-dimensional structures of the microbicidal domain of ***PMP*** -1 and ***PMP*** -2. The peptides and deriv. metapeptides based upon natural ***antimicrobial*** ***peptides*** have potent and broad spectrum activity against pathogens exhibiting multiple antibiotic resistance. Specific peptides can also potentiate the antimicrobial functions of leukocytes, such as neutrophils. In addn., they exhibit lower inherent mammalian cell toxicities than conventional ***antimicrobial*** ***peptides*** , and overcome problems of toxicity, immunogenicity, and shortness of duration of effectiveness due to biodegrdn., retaining activity in plasma and serum. The peptides and deriv. metapeptides exhibit rapid microbicidal activities in vitro, can be used to potentiate conventional antimicrobial agents, to potentiate other ***antimicrobial*** ***peptides*** , and are active against many organisms that exhibit resistance to multiple antibiotics currently in existence.

L6 ANSWER 2 OF 4 MEDLINE DUPLICATE 1
ACCESSION NUMBER: 2001021602 MEDLINE
DOCUMENT NUMBER: 20435924 PubMed ID: 10979928
TITLE: In vitro resistance to thrombin-induced platelet microbicidal protein in isolates of Staphylococcus aureus from endocarditis patients correlates with an intravascular device source.
AUTHOR: Fowler V G Jr; McIntyre L M; Yeaman M R; Peterson G E; Barth Reller L; Corey G R; Wray D; Bayer A S
CORPORATE SOURCE: Division of Infectious Diseases, Duke University Medical Center, Durham, NC 27710, USA.. fowle003@mc.duke.edu
CONTRACT NUMBER: AI-01647 (NIAID)
AI-39001 (NIAID)
AI-39108 (NIAID)
SOURCE: JOURNAL OF INFECTIOUS DISEASES, (2000 Oct) 182 (4) 1251-4.
Journal code: 0413675. ISSN: 0022-1899.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 200011
ENTRY DATE: Entered STN: 20010322
Last Updated on STN: 20010322
Entered Medline: 20001103
AB Platelet microbicidal proteins (***PMPs***) are small ***antimicrobial*** ***peptides*** secreted by mammalian platelets. In vitro resistance of Staphylococcus aureus strains to ***PMPs*** correlates with more extensive disease in experimental infective endocarditis (IE). To determine whether this same relationship exists in human S. aureus IE, we evaluated the in vitro ***PMP*** susceptibility phenotype of isolates from 58 prospectively-identified patients with definite S. aureus IE. On multivariate analyses, patients with S. aureus IE complicating an infected intravascular device were significantly more likely to have IE caused by a ***PMP*** -resistant strain (P=.0193). No correlations were detected between in vitro ***PMP*** resistance among S. aureus strains and the severity of human IE. This work supports the concept that in vitro ***PMP*** resistance in clinical S. aureus strains is associated with important clinical characteristics of S. aureus endovascular infections in vivo.

L6 ANSWER 3 OF 4 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1999:400812 CAPLUS
DOCUMENT NUMBER: 131:197362
TITLE: Antimicrobial peptides from platelets
AUTHOR(S): Yeaman, Michael R.; Bayer, Arnold S.
CORPORATE SOURCE: Division of Infectious Diseases, Department of

Medicine, St. John's, UCLA School of Medicine, Los Angeles, [redacted], USA

SOURCE: Drug Resistance Updates (1999), 2(2), 116-126
CODEN: DRUPFW; ISSN: 1368-7646

PUBLISHER: Churchill Livingstone
DOCUMENT TYPE: Journal; General Review
LANGUAGE: English

AB A review with 93 refs. The fact that platelets play a key role in host defense against infection has been demonstrated by the following observations': (a) platelets rapidly respond to sites of endovascular trauma and chemotactic stimuli assocd. with microbial colonization, and they are the earliest and predominant cells at sites of microbial colonization of vascular endothelium; (b) platelets have surface receptors and cytoplasmic granules comparable in structure and function to those of neutrophils, monocytes, or macrophages; (c) platelets adhere directly to, and may internalize, microbial pathogens, thereby enhancing their clearance from the bloodstream and limiting their potential for hematogenous dissemination; (d) bacterial, fungal, and protozoal pathogens are damaged or killed by activated platelets in vitro; (e) platelets are capable of initiating or amplifying complement fixation in the presence of microorganisms; (f) platelets generate oxygen metabolites which likely contribute to their antimicrobial activity; (g) platelets and leukocytes interact synergistically to exert enhanced antimicrobial functions in vitro; (h) thrombocytopenia increases susceptibility to and severity of certain infections. Importantly, rabbit and human platelets are now known to contain and release microbicidal proteins (termed platelet microbicidal proteins [PMPs] or thrombin-induced PMPs [tPMPs]) when stimulated with microorganisms or platelet agonists assocd. with infection in vitro. It is hypothesized that these microbicidal peptides accumulate locally at sites of endovascular damage or infection. Recent investigations have confirmed that tPMP-susceptible pathogens are less capable of proliferation or hematogenous dissemination in vivo as compared with their isogenic counterpart strains that are resistant to PMPs. Collectively, the above observations strongly suggest that platelets play key and multi-faceted roles in antimicrobial host defense which appear to be significantly mediated by PMPs and tPMPs.

REFERENCE COUNT: 93 THERE ARE 93 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L6 ANSWER 4 OF 4 MEDLINE DUPLICATE 2
ACCESSION NUMBER: 1998083139 MEDLINE
DOCUMENT NUMBER: 98083139 PubMed ID: 9421480
TITLE: Platelet microbicidal proteins and neutrophil defensin disrupt the Staphylococcus aureus cytoplasmic membrane by distinct mechanisms of action.

AUTHOR: Yeaman M R; Bayer A S; Koo S P; Foss W; Sullam P M
CORPORATE SOURCE: Division of Infectious Diseases, St. John's Cardiovascular Research Center, LAC-Harbor UCLA Medical Center, Torrance, California 90509, USA.. yeaman@afp76.humc.edu

CONTRACT NUMBER: AI 39001-01 (NIAID)
AI-32506-04 (NIAID)
AI39108-01 (NIAID)
SOURCE: JOURNAL OF CLINICAL INVESTIGATION, (1998 Jan 1) 101 (1) 178-87.
Journal code: 7802877. ISSN: 0021-9738.
PUB. COUNTRY: United States
DOCUMENT TYPE: Journal; Article; (JOURNAL ARTICLE)
LANGUAGE: English
FILE SEGMENT: Abridged Index Medicus Journals; Priority Journals
ENTRY MONTH: 199802
ENTRY DATE: Entered STN: 19980224
Last Updated on STN: 19980224
Entered Medline: 19980209

AB Platelet microbicidal proteins (***PMPs***) are hypothesized to exert microbicidal effects via cytoplasmic membrane disruption. Transmission electron microscopy demonstrated a temporal association between ***PMP*** exposure, damage of the Staphylococcus aureus cytoplasmic membrane ultrastructure, and subsequent cell death. To investigate the mechanisms of action of ***PMPs*** leading to membrane damage, we used flow cytometry to compare the effects of two distinct ***PMPs*** (thrombin-induced ***PMP*** -1 [tPMP-1] or ***PMP*** -2) with human neutrophil defensin-1 (hNP-1) on transmembrane potential (Deltapsi),

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=> file medline caplus biosis embase scisearch agricola
COST IN U.S. DOLLARS

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	0.21	0.21

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FILE 'CAPLUS' ENTERED AT 11:15:27 ON 30 DEC 2002
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FILE 'EMBASE' ENTERED AT 11:15:27 ON 30 DEC 2002

FILE 'SCISEARCH' ENTERED AT 11:15:27 ON 30 DEC 2002

FILE 'AGRICOLA' ENTERED AT 11:15:27 ON 30 DEC 2002

=> s antimicrobial peptide
L1 8040 ANTIMICROBIAL PEPTIDE

=> s platelet microbial protein
L2 7 PLATELET MICROBIAL PROTEIN

=> s l1 (p) l2
L3 1 L1 (P) L2

=> d l3 1 ibib abs

L3 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2002 ACS
ACCESSION NUMBER: 1996:536250 CAPLUS
DOCUMENT NUMBER: 125:193414
TITLE: Staphylocidal action of thrombin-induced platelet microbicidal protein is influenced by microenvironment and target cell growth phase
AUTHOR(S): Koo, Su-Pin; Yeaman, Michael R.; Bayer, Arnold S.
CORPORATE SOURCE: Dep. of Medicine, LAC-Harbor-UCLA Medical Center, Torrance, CA, 90509, USA
SOURCE: Infection and Immunity (1996), 64(9), 3758-3764
CODEN: INFIBR; ISSN: 0019-9567
PUBLISHER: American Society for Microbiology
DOCUMENT TYPE: Journal
LANGUAGE: English
AB Thrombin-induced ***platelet*** ***microbial*** ***protein*** (tPMP) is a small, cationic peptide released from rabbit platelets following exposure to thrombin in vitro. This peptide exerts potent in vitro microbicidal activity against a broad spectrum of bloodstream pathogens, including Staphylococcus aureus. It is known that the microbicidal actions of other cationic ***antimicrobial*** ***peptides*** (e.g., neutrophil defensins) are influenced by environmental factors and target cell growth phase. However, whether these parameters affect tPMP microbicidal activity has not been studied. Thus, we assessed the in vitro bactericidal activity of tPMP against two tPMP-susceptible strains, Bacillus subtilis ATCC 6633 and S. aureus 502A, in various target cell growth phases or under various microenvironmental conditions. The conditions studied included differing bacterial growth phase (logarithmic vs. stationary), temp. (range, 4 to 42.degree.C), pH (range, 4.5 to 8.5), cationicity (range, 0.1 mM to 2 M), anionicity (range, 0.08 to 5 .mu.M), and neutral carbohydrates ranging in mol. wt. (MW) from 180 to 37,700 (range, 50 to 500 mM) as well as rabbit platelet-free plasma and serum. TPMP staphyloccocidal activity was

membrane permeabilization, and killing of S. aureus. Related strains 6850 (Deltapsi -150 mV) and JB-1 ([redacted]tapsi -100 mV; a respiration-d[redacted]cient menadione auxotroph of 6850) were used to assess the influence of Deltapsi on peptide microbicidal effects. Propidium iodide (PI) uptake was used to detect membrane permeabilization, retention of 3,3'-dipentyloxacarbocyanine (DiOC5) was used to monitor membrane depolarization (Deltapsi), and quantitative culture or acridine orange accumulation was used to measure viability. ***PMP*** -2 rapidly depolarized and permeabilized strain 6850, with the extent of permeabilization inversely related to pH. tPMP-1 failed to depolarize strain 6850, but did permeabilize this strain in a manner directly related to pH. Depolarization, permeabilization, and killing of strain JB-1 due to ***PMPs*** were significantly less than in strain 6850. Growth in menadione reconstituted Deltapsi of JB-1 to a level equivalent to 6850, and was associated with greater depolarization due to ***PMP*** -2, but not tPMP-1. Reconstitution of Deltapsi also enhanced permeabilization and killing of JB-1 due to tPMP-1 or ***PMP*** -2. Both ***PMP*** -2 and tPMP-1 caused significant reductions in viability of strain 6850. In contrast to tPMP-1 or ***PMP*** -2, defensin hNP-1 depolarized, permeabilized, and killed both strains 6850 and JB-1 equally, and in a manner directly related to pH. Collectively, these data indicate that membrane dysfunction and cell death due to tPMP-1, ***PMP*** -2, or hNP-1 likely involve different mechanisms. These findings may also reveal new insights into the microbicidal activities versus mammalian cell toxicities of ***antimicrobial*** ***peptides*** .

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FILE 'MEDLINE, CAPLUS, BIOSIS, EMBASE, SCISEARCH, AGRICOLA' ENTERED AT 11:15:27 ON 30 DEC 2002

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L1        8040 S ANTIMICROBIAL PEPTIDE
L2           7 S PLATELET MICROBIAL PROTEIN
L3           1 S L1 (P) L2
L4        4657 S PMP
L5          12 S L1 (P) L4
L6           4 DUPLICATE REMOVE L5 (8 DUPLICATES REMOVED)
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=> log y

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	21.70	21.91

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-1.86	-1.86

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